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ABSTRACT

This paper hypothesized that higher levels of acculturation lead Asian American individuals to have more self-efficacy and interests in non-stereotypical occupations. One hundred eighty-seven Asian American students from various college campuses completed the Suinn-Lew Asian Self-Identify Acculturation Scale, the Confidence Inventory, and the Questionnaire about Asian American Career Development. The results of correlations and path analysis point to the role of acculturation in influencing career self efficacy, vocational interests, and career choices. The findings support the hypothesis that higher acculturation leads people to have higher self-efficacy and vocational interests in non-stereotypical roles; and that it also leads people to finally choose a non-stereotypical career choice. It is important for counselors to recognize the context in which Asian American's develop their interests, values, and self-efficacy in relation to careers, and to be aware of their acculturation level in order to provide effective counseling in career decision making. Helping clients understand their environment and the interaction of the traditional career assessment indices is strongly encouraged. (Contains 46 references.) (JDM)

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Running Head: SCCT with Asian Americans

Applying Social Cognitive Career Development Theory to Asian Americans

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Applying SCCT to Asian Americans

Asian Americans have been an "invisible" minority for a long time due to the misconception of "model minority" and under utilization of professional social service (Kitano, 1989; Sue, 1975). A wide spread stereotype about Asian Americans is that they all attain excellence in education, and science and technology focused occupation (Sue & Okazaki, 1990). This kind of stereotypical understanding about Asian American career development can be potentially harmful because individuals interested in non-stereotypical occupations might be disencouraged to pursue the idea or underscored at work. The sparse research on Asian Americans found that they were not only stereotyped but also segregated in occupational aspirations (Leong, 1993).

The reasons for Asian Americans entering into science and technology oriented occupations may be financial security and stability. It is especially critical for first generation immigrants to have a secure and stable job because financial stableness will provide family the basic need for survival. For first generation immigrants, many barriers such as lack of access to certain occupations within their own culture, lack of role models, low self-confidence, a sense of powerlessness, and a narrow range of past work experiences (Leong & Gim,1995, Walsh & Osipow, 1983) could play a significant role for their limited career choices. Language barriers could be another factor for Asian Americans to avoid occupations that involve heavy linguistic skills and people interaction (Sue & Kirk, 1973).

Family also plays an important role in Asian Americans' career development since traditional Asian culture value greatly collectivism, interdependence, deference paid to authority and old people, and family accord (Moy, 1992). Not surprisingly, youngsters would follow their parents' expectation instead of their preferred choices. In fact, Asian American college students

were found to have higher levels of dependent decision-making styles and less career maturity compared to their counterparts (Leong, 1991). Career choices may not be perceived as self exploration and expression, instead, a way for upward mobility or a means to provide family resources, and a responsibility to support family members (Leong & Chou, 1994). To further clarify Leong and Chou's points, Asian Americans do not view career choices as an individual choice, but a result from combining their own preference and family obligation.

Acculturation is another factor that might have meaningful impact on Asian Americans' career development and choices. Acculturation was found to demonstrate a significant relationship with help seeking behaviors (Atkinson & Gim, 1989; Atkinson, Whiteley & Gim, 1990), preference for counseling styles (Gim, Atkinson & Whiteley, 1990), orientation for occupational values (Leong & Tata, 1990), career choices (Leong and Chou, 1994; Leong & Brown, 1995;Tang, Fouad & Smith, 1999), psychological adjustment (Sandhu, 1997). Leong and Chou (1994) argue that levels of acculturation can be a factor for Asian Americans in decision making process of occupational choices, i. e. low levels of acculturation may limit individuals' career choices because less acculturated Asian Americans are more affected by stereotype and discrimination.

The elements discussed above accord with the contextual factors Lent, Brown and Hackett (1994) propose in their career development model. Their model claim that self-efficacy mediates person's career choices between contextual factors and occupational interests and choice actions. The social cognitive theory of career choice and performance by Lent, et al. incorporates several constructs from Bandura's (1986, 1997) social cognitive theory. Primarily, they suggest that individuals influence their own career development in interaction with the environment. In particular, Lent et al (1996) note that "a complex array of factors-such as

culture, gender, genetic endowment, sociostructural considerations and disability/health status-operate in tandem with people's cognition, affecting the natural range of their career possibilities" (p. 374).

The Lent et al. (1996) model of career choice proposes that individuals' exposure to learning experiences lead to the development of feelings of competence in their ability to accomplish tasks (self-efficacy) as well as outcome expectations, which is what they believe will happen as a result of engaging in those tasks. Lent et al. further propose that self efficacy beliefs and outcome expectations lead to the development of interests; interests lead to choice goals; and choice goals lead to choice actions (implementing the choice goals), and these eventually lead to performance.

For Asian Americans, it is particularly important to explicate the role of family, acculturation, and cultural values to help explain their career choices. Tang et al. (1999) tested Lent et al.'s model by investigating acculturation, family SES and involvement, career self-efficacy, interests and career choices of Asian American students. The data generally support the plausibility of SCCT to Asian Americans. However, in their analysis, family SES seems to be of little relationship with any variables, and values originally collected has been removed from the path analysis. This paper intends to reanalyze the data by including parental influence, parent's educational levels and values in the model to investigate how these factors as well as acculturation affect Asian Americans' career choices. The contextual variables in the models are acculturation, parental influence, and parental education. Career self-efficacy is the mediating variable between these proposed background variables and one's vocational values and interests. The career choices is the outcome variable in the model. It is hypothesized that higher levels of acculturation lead individuals to have more self-efficacy and interests in non-

stereotypical occupations for Asian Americans, and ultimately make a career choice that is not viewed as stereotypical. Similarly, higher levels of acculturation are associated with more emphasis on vocational values such autonomy and independence; and Asian Americans who have preference on these values are hypothesized to choose more nontraditional careers.

Method

Sampling

One hundred eighty seven participants recruited from various college campuses. Their average age was 22.58 with a standard deviation of 4.08. The majority (56.8%) of them were from 19 to 22 years of age. The gender distribution was 52.4% male and 47.6% female. Thirty three point three percent of the subjects were enrolled in science; 23.00% in business; 13.7% in social science; 5.9% in art; and 5.6% in other majors. Fifteen point five percent were undecided about their majors. Eighty percent of the participants were undergraduate students. The other twenty percent were graduate students. The ethnic backgrounds were as follows: 41.3% were Chinese, 6.5% Korean, 2.2% Japanese, 26.1% Vietnamese, 7.1% Hmong, 1.6% Lao, 11.8% Filipino, and 3.2% others.

Measurement

Suinn-Lew Asian Self-Identity Acculturation Scale (SL-Asia, Suinn & Lew, 1987), was used to measure levels of acculturation. This scale covers information about language, identity, friendship, behaviors, generational/geographic background and attitudes. The SL-Asian has been used in several studies that used levels of acculturation as one of the explanatory variables (Gim et al, 1990). The reliability is 0.91 at $p<.001$ and concurrent validity is .54 according to Suinn, Ahuna, & Khoo (1992). The higher scores indicates higher levels of acculturation.

Strong Interest Inventory was used to assess subjects' interests in occupations. The Strong Interest Inventory has been tested and studied widely and it also has some norm groups for minorities (Fouad; Harmon & Hansen, 1995). The test assesses preferences for occupations, school subjects, activities, leisure activities, types of people, preferences between two activities, and individual characteristics. On the profile, scales are grouped into four categories: General Occupational Themes, Basic Interest Scale, Occupational Scales, and Administrative Indexes and Special Scales (Strong, Hansen and Campbell, 1988). Six General Occupational themes will be used as indicators of the subjects' occupational interests.

The test-retest reliability of the Strong Interest Inventory's Occupational scales ranges from .81 to .91 for long intervals and the results from studies showed adequate validity level (Borgen, 1988; Harmon et al., 1995). Research on the Strong Interest Inventory has indicated its usefulness with racial minorities, including Asian Americans (Fouad, Harmon, & Hansen, 1995; Yang, 1994).

Values Scales (VS, Nevill & Super, 1989) was used to obtain information regarding subjects' work values. VS was developed by Super and Nevill (1985) out of the international work importance study; it is therefore useful in cross-cultural setting. Scales include Ability Utilization, Achievement, Advancement, Aesthetics, Altruism, Authority, Autonomy, Creativity, Economics, Rewards, Life Style, Personal Development, Physical Activity, Prestige, Risk, Social Interaction, Social Relations, Variety, Working Conditions, Cultural Identity, Physical Prowess, and Economic Security. The homogeneity for each item ranges from .67 to .87 with a median of .77 for college groups (Harmon, 1988) and reliability information from Super and Nevill's (1989) manual is .65 to .70. Intercorrelation within each subscale is valid but there is no predictive validity data available.

Confidence Inventory (Betz, 1994) This instrument has been chosen because it is based on career self-efficacy theory (Betz & Hackett, 1981; Hackett & Betz, 1992), which also informs this study. The instrument corresponds to six General Occupational Themes of the Strong Interest Inventory. It measures the confidence levels of Asian Americans in doing various activities. These activities are classified into six types corresponding to Holland's hexagon typology (Betz, 1994). The internal consistency reliability for six titles was high with alpha at .92 as an average (Betz, in press).

The Questionnaire about Asian American Career Development This questionnaire, developed by the researcher, provides demographic information and family background information such as parents' education, occupation and SES. It also provides information about family expectations for careers and family involvement in career planning activities. There are several items in the questionnaire to inquire information about whether their parents have influenced their career choices in their decision making. There is also an open-ended question pertaining to the career choice of participants, which provides the data about the outcome variable, career choice.

Procedure

Once the potential participants were identified, a mail distribution was utilized to ask for their participation. The subjects received a packet of instruments with a cover letter explaining the purpose of the study. The package also included a stamped envelope to return to the researcher. The cover letter instructed the participants to complete the instruments and return the packet in the stamped envelope. The participants received no incentives in any form and could request their results of the interests, values and confidence levels about different occupations if they indicated so.

Data Analysis Strategies

Prior to perform any data analysis, some scores obtained from the instruments needed to be transformed to represent stereotypical or non-stereotypical nature of the results. The career choices that the subjects stated such as engineer, psychologists, were calculated for its representation index. The representation index (RI) developed by Hsia (1988), is the percentage of Asian Americans in occupations divided by the percentage of Asian Americans in the total civilian force times 100. Based on Hsia, an RI of 100 indicates proportionate representation meaning the number of Asian Americans in a particular occupation corresponds to the statistical expectation. RI higher than 100 indicates overrepresentation and lower than 100 indicates less representation. Since the literature does suggest that occupational stereotypes are built upon the overrepresentation of Asian Americans in certain occupations, RI can denote the nature of their choices in terms of typical or not typical. The descriptive analysis of career choices confirms that stereotypical occupations such as engineers, computer scientists, accountants, physicians do have higher RI (244, 275, 241, 426 respectively). On the other hand, psychologists, lawyers which are viewed as non-stereotypical occupations for Asian Americans have low RI (56 and 55 for each).

The three subscales of Value Scales were used to represent more Westernized occupational values. The combined scores of "Ability Utilization", "Autonomy" and "Personal Development" were used in the data analysis for values. These three subscales are generally believed to be more Western oriented values other than Asian traditional values which focus more on interdependence and pragmatic values (Moy, 1992, Leong, 1991). Along the same logic, the original scores of interests and self-efficacy were also converted to represent the stereotypical nature of individuals' interests and self-efficacy. Specifically, Artistic and Social

scores combined were subtracted from the combined scores of Realistic and Investigative. A higher positive value indicates a more typical orientation in one's interests or self-efficacy.

The descriptive and univariate analysis were performed to provide an initial examination of the data. Then, a path analysis was conducted to test the SCCT model's fitness to the data.

Structural Equational Modeling (SEM), a statistical methodology, has become popular for nonexperimental research, especially for fields where methods for testing theories are not well developed. The purpose of such a model is to provide a meaningful and parsimonious explanation for observed relationships within a set of measured variables (Byrne, 1994). This model can provide a close and plausible approximation to observed variables, but that does not mean it is the only model that fits the data. Since the purpose of this study was to test a theory that incorporates self-efficacy in the career development of Asian Americans, SEM was utilized to 1) test whether the proposed career development model for Asian Americans is a plausible one; and 2) examine the relationships among the investigated variables to determine which model fits the data. If it was the model that did not fit the data, a modification of the model would be conducted to obtain a better fit. Usually, the parameters for the equation would be changed or the path between the variables would be dropped. The above method was repeated until the ideal goodness of fit index (above .90) was obtained.

Results

Univariate Analysis

The generation status and language proficiency are two factors that are closely related to acculturation levels. It is worth examining how these two factors are associated for the investigated variables in this study. Several T-tests were performed to determine whether there

is a difference in acculturation, parental influence, parental education, interests, values, self-efficacy and career choices between the US and non-US born subjects. The results found that only interests ($t=-3.48$, $p<.001$) and acculturation ($t=11.02$, $p=.000$) showed differences between the two groups but not the other variables. The US born Asian Americans had higher mean scores on acculturation and higher scores on non-stereotypical interests.

When language usage was examined to look for any difference in these investigated variables, four significant AVOVAs were found for the group. Three situations of home language usage were English only, ethnic language only, both English and ethnic language. A significant difference was found among the three groups in acculturation, parental education, values (Western oriented) and interests. The details are shown in Table 1. Individuals using English only at home consistently showed higher scores on acculturation, parental education, Western values and non-traditional interests. However, there was no difference found on career choices even though highly acculturated Asian Americans showed more interests in non-stereotypical occupations.

The correlation coefficients among the investigated variables are presented in Table 2. Acculturation was found to be correlated positively with parental education, but negatively vocational interests, career self-efficacy, and career choices. This result indicates that more acculturated individuals would have more preference for untraditional vocational interests, self-efficacy and career choices. Career choice was found to have a positive relationship with parental education, self-efficacy and interests.

Structural Equation Modeling

Theoretically, a person's acculturation, parental influence, and parental education will influence one's self-efficacy, which will influence interests and ultimately career choices. The

same contextual variables should have influence on one's values and interests and career choices too. The examination of the model fitness started with all contextual variables having a path to both self-efficacy and values, and acculturation, self-efficacy, interests and values have a path to career choice. The model fit statistics yielded X^2 =64.9 with d.f. of 5, and fit index (Comparative Fit Index CFI) = .62. According to Bentler (1995), this model did not fit the data and therefore, needed to be rejected. A modified model was rerun and found improvement in regard to fit index with X^2 =45.8 with d.f. of 6, and fit index (Comparative Fit Index CFI) = .73. The average off-diagonal absolute standardized residual equaled to .070, which suggested a fairly good fit to the data since it was closer to zero. However, because the ratio between chi-square and d.f. was greater than 3 and the CFI did not reach .90, the suggested acceptable fit index, the model was still not good enough to fully explain the data. Figure 1 illustrates the details of the path coefficients of each path in the modified model. The dotted lines are removed paths from, and the broken lines are the added paths for the original model.

It is noted that the path from interests to career choice is removed in the revised model. The decision to eliminate this path is based on the understanding that Asian Americans do not necessarily choose careers that match their interests (Leong, 1993). In Tang et al. (1999)'s study, the path between interests and career choices were reserved but no significant path was found either. Value was not found to have a significant relationship with either interest or career choice, however, the addition of the path between value and interest (even though no significant path coefficient) improved the model fitness. The significant path coefficients were found for the paths between acculturation and self-efficacy, interests, and career choices, between self-efficacy and interests, career choices.

Discussion

The results of the correlations and path analysis suggest the role of acculturation in influencing career self-efficacy, vocational interests and career choices. Since the path coefficients of these paths are all in negative value, it illustrates that as one's acculturation level increases, one also increases his/her confidence, interests and chances of making a choice in non-stereotypical occupations. This finding supports the hypothesis that higher acculturation leads people to have higher self-efficacy and vocational interests in non-stereotypical, and that it also leads people to finally choose a non-stereotypical career choice. Acculturation's role in Asian Americans' other behaviors has been found significant by previous studies (Atkinson & Gim, 1989; Atkinson, Whiteley & Gim, 1990; Gim, Atkinson & Whiteley, 1990; Leong & Tata, 1990; Leong & Chou, 1994; Leong & Brown, 1995; Sandhu, 1997). It is concluded that higher levels of acculturation has impact on Asian American' career related behavior as well.

Self-efficacy's mediating function is evidenced in this study. While it is negatively associated with acculturation, meaning Asian Americans feel more efficacious in non-stereotypical occupations as they become more acculturated, self-efficacy is positively related to career interests and choices, which provides support for Lent et al. (1994)'s claim that self-efficacy would lead people become interested in certain areas if they feel confident in such areas. However, the path between interest and career choices is not supported from this path analysis. In other words, although self-efficacy has strong relationship with career interests and with career choice directly, it does not influence career choice through interests path as predicted by Lent et al., which requires further study in the future for an explanation. One possible explanation is that regardless the interests they have, Asian Americans tend to choose a job that they see many other Asian Americans enter into. Therefore, interests play a little in their career choices. But self-efficacy, on the other hand, does have impacts on one's choices because as

Bandura (1986, 1997) discusses, if people see other people similar to them have success in accomplishing the task, they would feel confident they might be able to have the same success.

The findings from the path analysis do not fully support the fitness of SCCT, but they do provide a very useful framework for understanding the career development of Asian Americans. For instance, the model clearly illustrates that the mediating role of self-efficacy between background variables and criteria variable. The result that interest are found to have little relationship with career choices actually confirms the literature which argues that Asian American may not choose the occupation they are interested for the reasons such as family obligation to provide financial assistance to others, to bring family fame and reputation, and to satisfy parents' expectation for upward mobility (Leong, 1993; Leong and Chou, 1994; Tang & Fouad, 1999).

The vocational values measured by Nevill and Super (1989)'s Values Scales have 21 subscales, but only three subscales are used to represent the Western values. The positive relationship (not significant but at p=.059) acculturation and values supports the selection of these subscales. Asian Americans who speak English at home also demonstrate higher scores on Western oriented values. However, the role of values in the hypothesized model is unclear. It does not show any relationship with any of the hypothesized paths. It is expected to see the impact of family influence, parental education and acculturation on one's value systems and then one's career choices, but for Asian Americans, it seems that such prediction does not fit the data collected. The researcher even tried to add a path from self-efficacy to values, and found that this addition actually reduced the model fit index. It is necessary to have future studies to examine how Asian traditional values will influence one's interests and career choices.

Language usage seems to be an important factor for Asian American functioning since it is related significantly with a person's acculturation, parental education, values and interests. Sue and Kirk (1972, 1973) state that Asian Americans seem to have less interest in people interaction occupations that requires more language skills. Leong (1986) also argues that Asian Americans usually do not choose occupations that demand intensive use of linguistic skills. The finding of negative relationship between speaking English only at home and stereotypical Asian American interests (Investigative and Realistic type) probably provides another substantiation that Asian Americans are over-represented in technology related occupations not because they are necessarily interested in it but because it requires less language skills and human interaction.

The limitation of the study is its relatively small sample size for testing a path model since a small change or error in any variable could severely affect the model statistics. The measurement of familial background needs more conceptualization as well as psychometric testing for explaining the family dynamics of Asian Americans. Another limitation is that findings are based on the college population, therefore, the use of the findings to other Asian American populations needs to be careful. Finally, the Asian American group is very diverse, thus, individual differences have to considered in applying the results of this study when working with Asian Americans.

Implications of Counseling with Asian Americans

The research has found that Asian Americans tend to seek academic and vocational counseling rather than personal counseling (Olszewski-Kubilius & Scott, 1992). Even when they come for help regarding their vocational concerns, many other issues, for example, stress, anxiety and loneliness (Sue & Kirk, 1975) may occur during the exploration stage. It is vital for counselors to be aware of Asian Americans clients' acculturation level in order to provide

effective intervention in career decision making. Counselors need to consider the following when working with Asian American clients: a) generational status; b) acculturation levels; c) and how they feel about being Asian American or any other identity they prefer; d) language proficiency (particularly critical for immigrants); e) family background and socioeconomic status; d) parental expectations; e) their expressed interests and inventories interests; f) their values, and g) their perception of the values of their ethnic group. Only with understanding of these issues, how Asian Americans develop their self-efficacy in variety of occupation can be understood better.

It is important to recognize the context in which Asian American develop their interest, values, self-efficacy in relation to careers. Asian American traditional values orient towards collective benefits of a group instead of an individual, thus, emphasis on self-actualization and personal development may not work. Helping clients understand his/her environment and the interaction of the traditional career assessment indices with clients' environment is strongly encouraged.

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Table 1. Mean & ANOVA Results of Language Spoken at Home and Acculturation, Parental Education, Values and Interests

	Acculturation	Parental Education	Value	Interests
English Only	3.82	9.73	50.41	-3.01
Ethnic Language	3.01	6.81	46.34	1.85
Both	3.45	7.55	46.12	-2.63
	F = 43.07	F = 9.18	F = 3.87	F= 8.45
	P ≤ .000	P ≤ .000	P ≤ .025	P ≤ .000

Note: Value denotes Western oriented values and interests denote stereotypical Asian American interests.

Table 2. Correlation Coefficients for Investigated Variables in the Model

	1	2	3	4	5	6	7
Acculturation (1)	-						
Parental Education (2)	.47**	-					
Parental Influence (3)	-.06	-.09	-				
Value (4)	.14	.10	.10	-			
Interest (5)	-.42**	.10	-.05	-.08	-		
Self-Efficacy (6)	-.16*	.02	-.04	-.06	.57**	-	
Career Choice (7)	-.16*	.17*	-.01	-.01	.26**	.37**	-

Note: * = P ≤ .01; ** = P ≤ .000

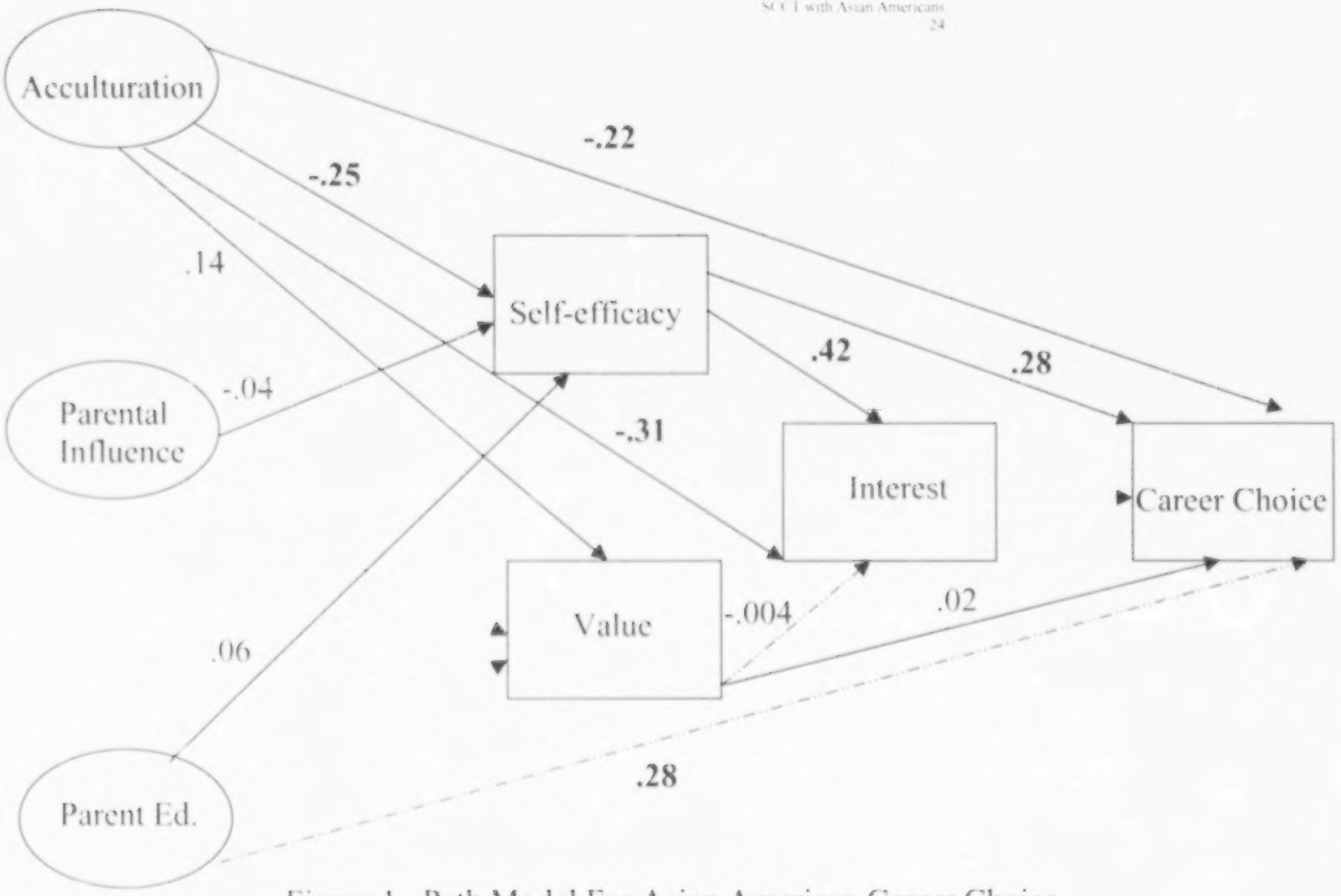

Figure 1. Path Model For Asian American Career Choice

The dotted lines are the paths removed in the modification; bolded coefficients indicate significant at or less than .001